

--24. (new) Tissue paper according to claim 13, wherein the weight ratio of lotion composition to tissue paper is 10 to 40%.

--25. (new) Tissue paper according to claim 13, wherein the lotion composition comprises:

(A') 15 to 30 weight % of a liquid dialk(en)ylether having from 12 to 24 carbon atoms,

(A'') 15 to 30 weight % of a liquid glyceride wherein glycerol is esterified with at least one acid having from 6 to 24 carbon atoms,

(B) 15 to 30 weight % of a water-in-oil emulsifier selected from liquid polyol polyester wherein a polyhydric alcohol having at least two hydroxy groups is esterified with at least one acid having from 6 to 30 carbon atoms,

(C) 0.5 to 4 weight % wax,

(D) 5 to 10 weight % humectant,

(E) 12 to 20 weight % water,

(F) optionally 0.5 to 5 weight % of a metal soap

(G) optionally up to 15 weight % of at least one coemulsifier,

(H) optionally 0.1 to 5 weight % additives.

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REMARKS

The application has been amended as needed so as to place it in condition for disposal at the time of the next Official Action.

For the Examiner's convenience, the status of the claims is as follows. Claims 1-12 have been cancelled and replaced with new claims 13-25.

The Official Action had objected to claims 1-12 as claim 1 used an abbreviation "W/O", without providing any definition for the term. By the present amendment, it will be seen that the expression "W/O" has been replaced with --water-in-oil--.

Claims 1-12 were rejected under 35 USC §112, second paragraph, for indefiniteness. Specifically, former claim 1 was held to be vague and indefinite, since it did not recite the amount of the lotion composition in the tissue paper. It was helpfully suggested that such amount could be recited in terms of function. In this regard, it will be seen that newly-presented independent claim 13 now recites the amount of the lotion composition in terms of its function, as was helpfully suggested by the Examiner in his Official Action. In addition, claim 19, which corresponds to former claim 7, has been written in a manner which is believed to be free of any criticisms. Specifically, the expression "the non-ionic surfactant" has been replaced with --the non-ionic emulsifier--, as this expression has clear antecedent basis. Thus, new claims 13-25 are believed to set out and circumscribe a particular tissue paper, with a reasonable degree of precision and particularity, when read in light of the teachings of the original specification. It is respectfully

submitted that a person having ordinary skill in the art would be reasonably apprised of the metes and bounds of new claims 13-25. Accordingly, it is believed that the rejection of claims 1-12 under 35 USC §112, second paragraph, has been overcome and should not be applied to new claims 13-25.

Claims 1, 2, 4-5, 7 and 11 were rejected under 35 USC §102(b) as being anticipated by, or in the alternative, under 35 USC §103(a) as being obvious over either of international publications WO 96/08601 (hereinafter referred to as '601), or WO 00/04230 (hereinafter referred to as '230). The Official Action states that these international publications teach all the limitations of the rejected claims, or at least minor modifications to obtain the claimed inventions would have been obvious to a person having ordinary skill in the art.

Reconsideration of the above rejections is respectfully requested for the following reasons.

The international publication '230 relates in its broadest teaching to PIT emulsions comprising:

- a) 2-70 wt. % C<sub>8</sub>-C<sub>22</sub>-fatty acid alkyl esters,
- b) 1-40 wt. % C<sub>8</sub>-C<sub>22</sub>-fatty alcohols,
- c) 10-40 wt. % C<sub>8</sub>-C<sub>22</sub>-alcohol polyglycol ether, and
- d) 1-40 wt. % C<sub>8</sub>-C<sub>22</sub>-fatty acid partial glyceride

as impregnating and softening agents for papers, non-wovens and webs.

This '230 international publication further contains one dependent claim (7), wherein the content of active ingredients is defined to be from 0.5 to 80% by weight, which in turn corresponds to water contents of 20 to 99.5% by weight. Thus, it cannot be excluded that there is some formal overlap between the water content defined in applicants' independent claim 13 which includes as component (E) 6 to 25% by weight of water, and the above-mentioned range of 20 to 99.5% by weight. However, this international publication does not contain any clear and unambiguous disclosure that tissue papers are to be treated with water-in-oil emulsions having a water content of 6 to 25% by weight of water.

With respect to the first difference, it should be noted that tissue papers represent a specific type of paper, which can be distinguished from normal papers, by its lower basis weight (normally less than 65 g/m<sup>2</sup>, under exceptional circumstances up to 80 g/m<sup>2</sup>) and its much higher tensile energy absorption which accounts for properties like flexibility and drapability. Moreover, tissue papers are characterized by their high absorption capacity for liquids.

Turning now to the specific examples in the '230 international publication, where tissue papers are treated with emulsions, it will be seen that these emulsions always contain much higher amounts of water than recited in the claims. If the weight percentages given in the tables on pages 22-24 of this

international publication for the active ingredients are added, contents on the order of 30 to 40% (water contents of 60 to 70%) are calculated.

With respect to the type of emulsion, that is water-in-oil or oil-in-water, the '230 international publication fails to provide any explicit description. The emulsions, according to this publication, are simply referred to as PIT (Phase Inversion Temperature). We know that these PIT emulsions are typically of the oil-in-water type (O/W). In this regard, and for the Examiner's convenience, applicants submit herewith a copy of U.S. Patent No. 6,333,362 where this PIT technique is described in further detail as a means for preparing ultra-fine foaming oil-in-water emulsions.

In any event, the '230 international publication does not contain any clear and unambiguous disclosure that within the overlapping weight contents (20 to 25 weight %), the emulsion to be used is of the water-in-oil emulsion type, as recited in applicants' claims. Rather, the opposite is the case. A water content of 20 weight % is the theoretical limit for water-in-oil emulsions, which in applicants' view also indicates that international publication '230 relates to oil-in-water emulsions.

If the water content now approaches this theoretical limit of 20 weight %, stability problems can easily occur.

This would seem to confirm applicants' conclusion that the '230 international publication does not disclose water-in-oil

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emulsions having a water content of 6 to 25 weight %, as is recited in applicants' independent claim 13.

If all three differences explained above are taken together, there can be no doubt that the '230 international publication simply fails to disclose or suggest the lotioned tissue papers recited in applicants' claims.

The second international publication relied upon in the Official Action is even further removed from the present claims.

Indeed, the '601 international publication discloses a polysiloxane-containing treatment composition for tissue paper products, in particular in the form of a lotion containing:

- a) 25-95 wt. % of at least one polyhydroxy compound, in particular polyethyleneglycol and/or glycerol,
- b) 5-75 wt. % polysiloxane, and
- c) 0-35 wt. % water.

The polyhydroxy compound (a) acts as a humectant (see page 16 of the application text) and therefore can be equated with the component (D) of applicants' independent claim 13. Consequently, novelty is established since applicants' claim 13 requires the humectant to be present in much lower amounts, namely 1 to 15 weight %. Moreover, the '601 international publication fails to disclose or suggest that this lotion is present in the form of a water-in-oil emulsion. In addition, this reference also fails to disclose or suggest the use of 3 to 40 weight % of at least one non-ionic water-in-oil emulsifier, as

is also recited as component (B) in applicants' independent claim 13. Although, some non-ionic surfactants are mentioned on page 22, these are disclosed in the context of skin care agents without specifying their amounts.

With respect to the alternative obviousness rejection advanced in the Official Action, the following should be borne in mind:

Applicants have discovered that water contents on the order of 6 to 25% achieve a suitable balance of skin care properties and mechanical strength. A relatively high water content is favorable since it counteracts the tendency of the skin to lose moisture, especially in combination with humectants. Simultaneously, it was observed that too high a water content, for instance 60 to 70 weight % as used in the example of the WO '230 publication, strongly reduces the mechanical strength of the tissue papers, since water breaks up the hydrogen bonds responsible for the cohesion of the tissue papers. In this context, it should be noted that there are webs and non-woven (e.g. polyethylene based) of the type disclosed in the WO '230 publication where water contents are not harmful. The observation that high water contents adversely affect the strength is thus specific to tissue papers as recited in applicants' claims. It is respectfully submitted that this also speaks against the obviousness rejection advanced in the Official Action.

The selection of water-in-oil emulsions brings about further advantages. Since the water represents the inner phase, less water will evaporate from the tissue. If water represents the outer continuous phase as in PIT oil-in-water emulsions, the water will be absorbed by the tissue which disturbs the emulsion structure. Furthermore, the water-in-oil emulsion lotions tend to protect the tissue web from the water which cannot attack the hydrogen bonds that keep the tissue paper together as the water is "encapsulated" by the outer oil phase.

It is respectfully submitted that when considering the applied references collectively, the same simply fail to disclose or suggest a tissue paper having the characteristic features recited in applicants' newly-presented independent claim 13.

The Primary Examiner's kind indication of allowability with respect to former claims 3, 6, 8-9 and 12 is sincerely appreciated. However, in view of the present amendment and the foregoing remarks, it is believed that newly-presented independent claim 13 patentably distinguishes from the applied prior art.

In view of the present amendment, it is believed that this application has been placed in condition for allowance. Reconsideration and allowance on the basis of new claims 13-25 are accordingly earnestly solicited.

In the event that there are any questions relating to this amendment or to the application in general, it would be



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appreciated if the Examiner would telephone the undersigned attorney concerning such questions so that this application may be expedited.

Respectfully submitted,

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